

ABSTRACT OF THE DISCLOSURE

To reduce a current loss through a channel and improve electron mobility, a first semiconductor layer and a second semiconductor layer (sequentially formed on a semiconductor substrate) have different lattice properties. The first semiconductor layer and the second semiconductor layer may be etched to form a first semiconductor pattern. A third semiconductor layer having a lattice property substantially identical to that of the first semiconductor layer may be formed over the first semiconductor pattern. The third semiconductor layer may then be etched to form a second semiconductor pattern. A gate may be formed on the second semiconductor pattern. The contact surface between the second semiconductor pattern and the gate pattern may consequently increased to reduce a current loss. Further, the lattice properties may be changed to improve electron mobility of the semiconductor layers.